## 3.2 An Integrated Approach to Programming – Using a Theme

An integrated approach to programming using a theme or other focus can provide a holistic approach to teaching and assessing a number of units of competency.

Units that relate to a particular aspect of the manufacturing, engineering and related services industries could be grouped together, for example:

* working in the industry
* workplace health and safety
* maintaining quality
* communication in the workplace
* tools and equipment.

Programs could be developed using a theme related to the manufacturing, engineering and related services industries, such as:

* general engineering
* production technology
* fabrication trade
* jewellery manufacture
* marine craft construction
* boating services.

### Sample Program Plan and carry out quality work

**Rationale:** This theme is intended to provide the opportunity for students to develop knowledge and skills required to operate in an interactive work environment, contribute to a team effort, plan and carry out work and apply established quality procedures to an employee’s own work within a manufacturing, engineering or related services environment.

**Units of competency:** MEM14004A Plan to undertake a routine task

MEM15002A Apply quality systems

MEM15024A Apply quality procedures

MEM16007A Work with others in a manufacturing, engineering or related environment

**Key terms and concepts:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Plan to undertake a routine task** | **Apply quality systems** | **Apply quality procedures** | **Work with others in a manufacturing, engineering or related environment** |
| * communication * compliance * obtain, understand and clarify instructions/procedures * planning and preparation * quality assurance * review plan * routine task * safe work practices and procedures * specifications * task outcomes * task requirements * work instructions and procedures * work sequencing * work/job plan * workplace policies and procedures. | * benefits of a team approach * conformance to specifications * costs/consequences of poor quality * customer * customer satisfaction * detection and reporting/recording of defects * engaging in quality improvement * importance of training * monitoring process/procedure for performance of operation and quality of product/service * performance measure * products and service * quality * quality assurance * quality control * quality cycle * quality improvement * quality improvement system * quality inspection * quality system * responsibilities of the employer/organisation * role of the individual employee * safe work practices and procedures * specifications * standard operating procedures (SOP) * total quality control * work instructions and procedures. | * applying quality system procedures * benefits of good customer/supplier relationships * benefits of good quality * conformance to specifications * customer * customer requirements * ‘fit for purpose’ * importance of training * process and product specifications * product * quality * quality procedures * quality system procedures * responsibility for quality of own work * role of the individual employee * safe work practices and procedures * service * standard operating procedures (SOP) * work instructions and procedures * written communication. | * appropriate workplace conduct * career pathways * communication * completion of work tasks * conflict * conflict resolution * cooperative working environments * effective interpersonal skills * goals and objectives * identifying job role and responsibilities * industry terminology and jargon * lines of reporting * organisational/management structure * personal attributes * relationship between individual and team work roles * reviewing and modifying work processes * role of employee in quality assurance * safe work practices and procedures * strategies to manage workload * task management * teamwork * time management * work ethic * work instructions and procedures * work/task requirements * working with others. |

**Assessment**:

The tasks referred to in this table are briefly explained in the program itself and/or in Section 4 of this Support Document.

|  |  |
| --- | --- |
| **MEM14004A Plan to undertake a routine task** | |
| *Elements* | *Possible assessment strategy* |
| 1. Identify task requirements | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 9, 10, 11, 12, 20, 21, 22 and 23. |
| 2. Plan steps required to complete task | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 9, 11, 12, 13, 20, 21, 22 and 23. |
| 3. Review plan | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 9, 11, 12, 13, 20, 21, 22 and 23. |

|  |  |
| --- | --- |
| **MEM15002A Apply quality systems** | |
| *Elements* | *Possible assessment strategy* |
| 1. Work within a quality system | * Tasks 1, 9, 10, 11, 12, 13, 14, 20, 21, 22 and 23. |
| 2. Engage in quality improvement | * Tasks 1, 9, 10, 11, 12, 13, 14, 20, 21, 22 and 23. |

|  |  |
| --- | --- |
| **MEM15024A Apply quality procedures** | |
| *Elements* | *Possible assessment strategy* |
| 1. Take responsibility for own quality | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 9, 10, 11, 12, 13, 15, 16, 20, 21, 22 and 23. |
| 2. Apply standard procedures of workplace quality to own job | * Tasks 1, 9, 10, 11, 12, 13, 15, 16, 20, 21, 22 and 23. |

|  |  |
| --- | --- |
| **MEM16007A Work with others in a manufacturing, engineering or related environment** | |
| *Elements* | *Possible assessment strategy* |
| 1. Identify roles and responsibilities | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 5, 7, 9, 11, 12, 13, 15, 16, 20, 21, 22 and 23. |
| 2. Plan activities | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 5, 7, 9, 11, 12, 13, 15, 16, 20, 21, 22 and 23. |
| 2. Work with others | * Students will have several opportunities to demonstrate competency in this element and associated performance criteria during completion of learning activities and assessment tasks throughout the metal and engineering course * Tasks 1, 5, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22 and 23. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Task 1** Work placement activities & journal | **Task 2** Newspaper scrapbook | **Task 3** Extended response – Environmental issues | **Task 4** OHS written test | **Task 5**  Workplace inspection – risk assessment | **Task 6** PEE, safety devices & emergency equipment | **Task 7**  Scenario – dealing with an emergency | **Task 8** Visual communication test | **Task 9** Work order | **Task 10** Extended response – Quality | **Task 11** Written documentation | **Task 12** Work/job plan – individual & team task | **Task 13** Self & peer evaluation | **Task 14** Quality improvement system | **Task 15** Workshop assistant | **Task 16** Workgroup leader | **Task 17** MSDS | **Task 18** Tools, plant & equipment | **Task 19** Technical drawings | **Task 20** Toolbox | **Task 21** Vice/clamping device | **Task 22** Bush BBQ/pizza oven/camp oven | **Task 23** Industry-specific class project | **Task 24**  Measurement & calculation exercises | **Task 25** Materials & components | **Task 26** Job quote | **Task 27** Charts & graphs | **Task 28** Freehand sketches |
| **MEM14004A Plan to undertake a routine task** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *1 Identify task requirements* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 Instructions and procedures are obtained, understood and where necessary clarified | ✓ |  |  |  |  |  |  |  | ✓ | ✓ |  | ✓ |  |  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.2 Relevant specifications for task outcomes are obtained, understood and where necessary clarified | ✓ |  |  |  |  |  |  |  | ✓ | ✓ |  | ✓ |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.3 Task outcomes are identified | ✓ |  |  |  |  |  |  |  | ✓ | ✓ |  | ✓ |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.4 Task requirements such as completion time and quality measures are identified | ✓ |  |  |  |  |  |  |  | ✓ | ✓ |  | ✓ |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  | ✓ |  |  |
| *2 Plan steps required to complete task* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.1 Based on instructions and specifications provided, the individual steps or activities required to undertake the task are understood and where necessary clarified | ✓ |  |  |  |  |  |  |  | ✓ |  |  | ✓ |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.2 Sequence of activities is identified | ✓ |  |  |  |  |  |  |  | ✓ |  |  | ✓ |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.3 Plan is checked to ensure it complies with specifications and task requirements | ✓ |  |  |  |  |  |  |  | ✓ |  |  | ✓ |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| *3 Review plan* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.1 Effectiveness of plan is reviewed against specifications and task requirements | ✓ |  |  |  |  |  |  |  |  |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 3.2 If necessary, plan is revised to better meet specifications and task requirements | ✓ |  |  |  |  |  |  |  |  |  |  | ✓ | ✓ |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Task 1** Work placement activities & journal | **Task 2** Newspaper scrapbook | **Task 3** Extended response – Environmental issues | **Task 4** OHS written test | **Task 5**  Workplace inspection – risk assessment | **Task 6** PEE, safety devices & emergency equipment | **Task 7**  Scenario – dealing with an emergency | **Task 8** Visual communication test | **Task 9** Work order | **Task 10** Extended response – Quality | **Task 11** Written documentation | **Task 12** Work/job plan – individual & team task | **Task 13** Self & peer evaluation | **Task 14** Quality improvement system | **Task 15** Workshop assistant | **Task 16** Workgroup leader | **Task 17** MSDS | **Task 18** Tools, plant & equipment | **Task 19** Technical drawings | **Task 20** Toolbox | **Task 21** Vice/clamping device | **Task 22** Bush BBQ/pizza oven/camp oven | **Task 23** Industry-specific class project | **Task 24**  Measurement & calculation exercises | **Task 25** Materials & components | **Task 26** Job quote | **Task 27** Charts & graphs | **Task 28** Freehand sketches |
| **MEM15002A Apply quality systems** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *1 Work within a quality system* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 Instructions and procedures are followed and duties are performed in accordance with requirements of quality improvement system | ✓ |  |  |  |  |  |  |  |  | ✓ |  | ✓ |  | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.2 Conformance to specification is ensured | ✓ |  |  |  |  |  |  |  |  |  |  |  |  | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.3 Defects are detected and reported according to standard operating procedures | ✓ |  |  |  |  |  |  |  |  |  |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.4 Performance of operation or quality of product or service is monitored to ensure customer satisfaction | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| *2 Engage in quality improvement* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.1 Current performance is assessed | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.2 Established performance measures are identified | ✓ |  |  |  |  |  |  |  |  | ✓ |  | ✓ |  | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.3 Specifications and standard operating procedures are identified | ✓ |  |  |  |  |  |  |  | ✓ |  |  | ✓ |  | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.4 Defects are detected and reported according to standard operating procedures | ✓ |  |  |  |  |  |  |  |  |  |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.5 Process improvement procedures are participated in | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.6 The improvement of internal/external customer/supplier relationships are participated in | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.7 Performance of operation or quality product or service is monitored to ensure customer satisfaction | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Task 1** Work placement activities & journal | **Task 2** Newspaper scrapbook | **Task 3** Extended response – Environmental issues | **Task 4** OHS written test | **Task 5**  Workplace inspection – risk assessment | **Task 6** PEE, safety devices & emergency equipment | **Task 7**  Scenario – dealing with an emergency | **Task 8** Visual communication test | **Task 9** Work order | **Task 10** Extended response – Quality | **Task 11** Written documentation | **Task 12** Work/job plan – individual & team task | **Task 13** Self & peer evaluation | **Task 14** Quality improvement system | **Task 15** Workshop assistant | **Task 16** Workgroup leader | **Task 17** MSDS | **Task 18** Tools, plant & equipment | **Task 19** Technical drawings | **Task 20** Toolbox | **Task 21** Vice/clamping device | **Task 22** Bush BBQ/pizza oven/camp oven | **Task 23** Industry-specific class project | **Task 24**  Measurement & calculation exercises | **Task 25** Materials & components | **Task 26** Job quote | **Task 27** Charts & graphs | **Task 28** Freehand sketches |
| **MEM15024A Apply quality procedures** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *1 Take responsibility for own quality* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 Concept of supplying product or service to meet customer requirements (internal or external) is understood and applied | ✓ |  |  |  |  |  |  |  |  | ✓ |  | ✓ |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.2 Responsibility is taken for quality of own work | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| *2 Apply standard procedures of workplace quality to own job* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.1 Quality system procedures are followed | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  |  | ✓ |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.2 Conformance to specifications is ensured | ✓ |  |  |  |  |  |  |  |  | ✓ |  |  |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Task 1** Work placement activities & journal | **Task 2** Newspaper scrapbook | **Task 3** Extended response – Environmental issues | **Task 4** OHS written test | **Task 5**  Workplace inspection – risk assessment | **Task 6** PEE, safety devices & emergency equipment | **Task 7**  Scenario – dealing with an emergency | **Task 8** Visual communication test | **Task 9** Work order | **Task 10** Extended response – Quality | **Task 11** Written documentation | **Task 12** Work/job plan – individual & team task | **Task 13** Self & peer evaluation | **Task 14** Quality improvement system | **Task 15** Workshop assistant | **Task 16** Workgroup leader | **Task 17** MSDS | **Task 18** Tools, plant & equipment | **Task 19** Technical drawings | **Task 20** Toolbox | **Task 21** Vice/clamping device | **Task 22** Bush BBQ/pizza oven/camp oven | **Task 23** Industry-specific class project | **Task 24**  Measurement & calculation exercises | **Task 25** Materials & components | **Task 26** Job quote | **Task 27** Charts & graphs | **Task 28** Freehand sketches |
| **MEM16007A Work with others in a manufacturing, engineering or related environment** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *1 Identify roles and responsibilities* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.1 Own role and responsibilities are identified | ✓ |  |  |  |  |  | ✓ |  |  | ✓ |  | ✓ |  |  | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 1.2 Relationships with immediate group and with employees performing related/interdependent activities are identified | ✓ |  |  |  |  |  | ✓ |  |  | ✓ |  | ✓ |  |  | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| *2 Plan activities* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.1 Common goals, objectives and task requirements are identified and clarified with appropriate persons | ✓ |  |  |  | ✓ |  |  |  | ✓ |  |  | ✓ |  |  | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 2.2 Individual tasks are determined and agreed on according to workplace procedures | ✓ |  |  |  |  |  |  |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| *3 Work with others* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.1 Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives | ✓ |  |  |  |  |  | ✓ |  |  |  |  |  |  |  | ✓ | ✓ | ✓ | ✓ |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 3.2 Assigned and agreed tasks are performed in accordance with agreed requirements, specifications and workplace procedures | ✓ |  |  |  |  |  | ✓ |  |  |  |  |  |  | ✓ | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 3.3 Work progress is reviewed and modified as agreed to complement the work of others | ✓ |  |  |  |  |  |  |  |  |  |  |  | ✓ |  | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |
| 3.4 Agreed reporting lines are followed using standard operating procedures | ✓ |  |  |  |  |  | ✓ |  |  |  |  | ✓ |  |  | ✓ | ✓ |  |  |  | ✓ | ✓ | ✓ | ✓ |  |  |  |  |  |

| **Unit / Element of competency /**  **Performance criteria** | **Content** | **Possible learning experiences / activities** |
| --- | --- | --- |
| *MEM15002A Apply quality systems*  **1 Work within a quality system**  1.4 Performance of operation or quality of product or service is monitored to ensure customer satisfaction.  *MEM15024A Apply quality procedures*  **1 Take responsibility for own quality**  1.1 Concept of supplying product or service to meet the customer requirements (internal and external) is understood and applied. | Product/services and customer A definition of:   * product * service * customer   + internal   + external. | Discussion and accompanying worksheet:   * definition and examples of product and service * definition and examples of internal and external customer * difference between customer preferences, needs and expectations * differing needs of internal and external customers and explore why their needs are different * how a lack of understanding of client needs can contribute to the failure of projects.   Class debate – ‘Businesses do not need to have a good relationship with their customer to provide good service’.  Visual stimulus – sample work orders.  Discussion:   * relevance of work orders to the manufacturing, engineering and related services industries * information that should be included in a work order.   Follow (and eventually develop) work orders for practical tasks/projects. [Link to Task 9] |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **1 Identify roles and responsibilities**  1.1 Own role and responsibilities are identified.  **3 Work with others**  3.1 Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives. | Employee attributes Personal attributes and work ethics of industry employees:   * attendance and punctuality * ethical behaviour * honesty * work performance * taking directives * attention to detail * personal presentation * attitude | Define ‘personal attribute’, ‘work ethic’ and ‘interpersonal skills’.  Students discuss personal experiences where they have received poor service from an individual who has not displayed the personal attributes and work ethic required. How did it make you feel as a customer?  Class discussion – describe your ideal workplace |
|  | * confidentiality * consistency of service * safe work practices. | (consider both culture and climate).  Small group discussion and report back to class – personal attributes and interpersonal skills that are needed for employment in the manufacturing, engineering and related |
|  | An awareness of effective interpersonal skills:   * effective communication skills * correct use of terminology and jargon * giving and receiving feedback * checking and clarifying task-related information * interpreting instructions * conflict resolution techniques * use of verbal and non-verbal modes/methods of communication * identifying and resolving communication breakdowns and barriers. | services industries.  Simulation – set the scene for a typical workplace within the manufacturing, engineering or related services industry. Students are to negotiate a code of conduct to follow in the classroom and/or workshop throughout the metal and engineering course. (Option – have the students ‘sign off’ on the agreement.)  Visual stimulus (if required) – examples of the code of conduct from a range of businesses/organisations in the industries.  Work placement activity – locate the business/ organisation’s code of conduct. [Link to Task 1] |
|  | Industry standards for workplace interaction:   * courtesy * discretion * confidentiality * structured follow-up procedures. | Introduce or revise expectations of students on work placement. Discuss the importance of appropriate workplace conduct while on work placement. |
|  | Appropriate workplace conduct:   * regular attendance * punctuality * maintaining an orderly workspace * appropriate personal presentation standards for the industry and job role * cooperativeness * self-confidence * self-respect * acceptance of constructive criticism * willingness for self-improvement * flexibility. |  |
| *MEM15002A Apply quality systems*  **1 Work within a quality system**  1.1 Instructions and procedures are followed and duties are performed in accordance with requirements of quality improvement system.  1.4 Performance of operation or quality of product or service is monitored to ensure customer satisfaction.  *MEM15024A Apply quality procedures*  **1 Take responsibility for own quality**  1.1 Concept of supplying product or service to meet the customer requirements (internal and external) is understood and applied. | Quality assurance An awareness of commonly accepted meaning/s of quality system terminology and concepts within the manufacturing, engineering and related services industries:   * quality * quality system * quality improvement system * quality system procedure * quality assurance * quality control * quality inspection * quality improvement * total quality control * ‘fit for purpose’ * performance measure. | *The commitment to quality should be encouraged throughout the metal and engineering course. It should be evident when planning and documenting, through to the making of a product or delivery of a service. The concepts of quality systems and procedures should be applied to all practical tasks/projects.*  Worksheet – including a definition of all terms listed in the content column (glossary of terms).  Class discussion:   * costs and consequences of poor quality * factors affecting quality * importance of quality customer service within the manufacturing, engineering and related services industries * responsibility of company/organisation for quality |
|  | Acknowledgement of the importance of training of workers to achieving quality work outcomes. | * responsibility of employees for quality * role of employees within the total quality process * benefits of a team approach to quality * continuous improvement as a means to enhance quality of work performance * role of training to achieve quality work outcomes. |
|  | A basic knowledge of:   * the quality cycle   + plan   + do   + check   + act * strategies/approaches for working within a quality system * procedures to follow in undertaking work duties/tasks. | Handouts – summary of discussion and information on all points in the content column.  Briefly examine the requirements of at least one manufacturing, engineering or related services task/project and outline the roles of people at all levels in the company/organisation to achieve quality and maintain quality assurance. |
|  | An awareness of:   * the costs and consequences of poor quality including   + lost customers | In relation to practical tasks/projects, students to:   * identify possible quality system procedures and inspections required |
|  | * + accidents   + wastage   + lost time   + low morale   + conflict * the reasons/benefits of following the requirements of the quality improvement system. | * develop procedures and/or manufacture equipment to check quality and conformity (eg visual and mechanical checks) * discuss consequences of not meeting quality assurance.   [Link to Tasks 12 and 20–23] |
|  | An overview of:   * quality assurance, quality activities and continuous improvement in the manufacturing, engineering and related services industries environment * the role of the individual employee within the total quality process * the benefits of a team approach to work within a quality system * responsibilities of the employer/organisation for implementation of quality systems. | Video – covering the concepts of quality.  Case study – industry example(s) of quality systems and procedures in practice. (Option – include an industry visit).  Written task – extended response question (preparation and practice for HSC exam). [Task 10] |
| *MEM14004A Plan to undertake a routine task*  **1 Identify task requirements**  1.2 Relevant specifications for task outcomes are obtained, understood and where necessary clarified.  *MEM16007A Work with others in a manufacturing, engineering or related environment*  **1 Identify roles and responsibilities**  1.1 Own role and responsibilities are identified. | Individual’s role and responsibilities Identifying roles through:   * job/role statement * manager/supervisor/team leader * experienced colleagues. | Class discussion:   * what information about job roles and workplace practices may be gained from each source (see content column) * consider the best source to access in a range of situations.   Simulation – set the scene for a typical workplace within the manufacturing, engineering or related services industry. Students are to work in a specific role within the work group. This will occur during the planning, production and completion of class tasks and projects. Roles and responsibilities to be rotated to allow students to gain different experiences. The roles might include store person, supervisor/team leader, OHS officer, quality control officer, maintenance, cleaning and other positions |
|  |  | required for the manufacture of a particular product or provision of a particular service. (Option – as a class develop job statements for particular roles. These can be modified as required throughout the course.)  [Link to Tasks 15–16 and 20–23] |
|  | Completion of work tasks:   * adhere to safety procedures (including personal protective equipment [PPE] and other dress requirements) * follow directions from supervisor * maintain personal presentation standards * adhere to workplace policies * maintain personal work space * contribute to productive work environment by accepting responsibility for own work and assisting co-workers as required * check that required materials and equipment are available and meet requirements of the task * seek advice/obtain information as required from   + co-workers and supervisor   + trade personnel   + contractors   + suppliers   + industry/regulatory bodies. | Overhead – points to remember when completing work tasks. |
|  | A basic overview of the role of employees in quality assurance. | Class discussion – the importance of:   * taking responsibility for the quality of own work * using accepted industry/organisation techniques, practices and procedures.   Written task – extended response question (preparation and practice for HSC exam). [Task 10] |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **1 Identify roles and responsibilities**  1.2 Relationships within immediate group and with employees performing related/ interdependent activities are identified.  **2 Plan activities**  2.1 Common goals, objectives and task requirements are identified and clarified with appropriate persons.  **3 Work with others**  3.1 Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives.  3.3 Work progress is reviewed and modified as agreed to complement the work of others. | Teamwork Groups/teams:   * established or ad hoc work units * working parties * committees * self-directed teams. | *Teamwork is integral to a successful company/ organisation in the manufacturing, engineering and related services industries. Throughout all operational units the principles of teamwork should be applied to build on the theory taught in this program. Practise and promote teamwork within the class during workshop activities, practical class projects and assessment events.*  Students develop their own definitions of team and teamwork. Share their responses with the class to devise shared definition.  Brainstorm – types of groups/teams found in the industry and their purpose. Students should be able to reflect on their work placement experience. |
| 3.4 Agreed reporting lines are followed using standard operating procedures. | An understanding of the relationship between individual roles and the role of the team/group. | Class discussion.  Practical – a class task/project where each student has a clearly defined role but is working towards a common goal. [Task 23] |
|  | Features and characteristics of successful teamwork:   * identification of purpose and aim of team * goal setting * planning and organising work routines. | Students reflect upon their own experiences working with others (eg part-time work, sporting team, community group) and on what makes a good team, how to encourage teamwork and practical approaches to improve team performance. Use this discussion to develop a list of |
|  | Working with others:   * one-to-one communication in a group or team * taking part in informal discussions * following instructions * consulting with the community * taking part in meetings * dealing with conflict * providing assistance to team members. | features and characteristics of successful teamwork. |
|  | Importance of:   * tolerating and respecting differences * demonstrating respect and empathy when working with others * sensitivity when dealing with other points of view * constructively raising and discussing ideas * cooperation and good working relationships * knowledge of work group member’s responsibilities and duties. | Define ‘tolerance’, ‘respect’ and ‘empathy’.  Brainstorm and class discussion:   * identify manner in which various cultures show respect * consequences of insensitivity * workplace strategies to enable issues to be raised and discussed in a constructive manner * practical ways that individuals can contribute to a harmonious working environment |
|  | Providing assistance to team members:   * formal/informal support * mentoring * sharing ideas and knowledge. | Overhead – identify ways in which assistance can be provided to team members.  Peer tutoring – students who have displayed knowledge and skills can assist and support other students. |
|  | A basic understanding of organisational/management structure common to manufacturing, engineering or related industry context. | Draw an organisational flowchart for a typical manufacturing, engineering or related services company/organisation. Indicate appropriate lines of |
|  | Understanding lines of reporting and communication with supervisor/team leader and others in the workplace. | reporting and communication.  Work placement activity or industry visit. [Link to Task 1] |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **3 Work with others**  3.1 Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives. | Communication Barriers to effective communication:   * negative subtext * ethnocentrism * bias and stereotyping * lack of empathy * gender issues. | Stimulus materials (eg comic strip, cartoon, snippets from a movie or TV show, video on topic) to promote discussion of barriers to effective communication.  Class discussion – what can go wrong if communication breaks down?  Overhead:   * barriers to effective communication and how to overcome them * important points to remember when communicating |
|  |  | * does the ‘audience’ affect how you communicate? * should the ‘audience’ affect how you communicate? * what differences might you expect when communicating with co-workers, supervisors, contractors, trainers and the public? |
|  | The importance of communicating in a language that is:   * clear * concise * directive * purposeful * correct * courteous * culturally sensitive. | Chinese whispers – on arrival at class students are told a story which they must convey to the next person entering the room. Observe what happens to the story as it progresses through the class.  Class activity:   * students play a game where they have to give their partner instructions on how to draw a picture (eg a spotted dog) without telling them of or showing |
|  | Appropriate use of industry terminology and jargon. | them the picture   * discuss the effective and ineffective communication strategies they used in the activity and how they could have improved them.   Identify appropriate language for a range of situations:   * in the workplace (with both colleagues and customers) * at home * in public.   Role plays – students demonstrate their understanding of the communication process including using appropriate language and tone for a variety of situations, for example:   * providing instructions to a colleague * receiving work instructions from the supervisor * communicating with a customer who does not speak English * working on site with noisy plant/equipment * handling a customer or colleague complaint face-to-face and over the telephone. |
|  | Effective questioning techniques:   * open questions * closed questions * reflective questions. | Handout.  Case studies and/or role plays. |
|  | The technique of active listening. |  |
|  | How to elicit, interpret and provide feedback. | Identify the different types of feedback and discuss the value of each:   * positive * negative * constructive.   Brainstorm the benefits of receiving feedback for the company, the worker and the customer.  Discuss ways to elicit constructive feedback.  Class discussion:   * strategies for responding to negative feedback * how to use feedback to improve skills and knowledge.   In small groups analyse sample feedback for a range of situations and identify how the feedback can improve immediate and future work outcomes.  [Link to Task 13] |
|  | The importance of recording information that is:   * clear * legible * accurate * concise * and contains appropriate use of industry terminology and abbreviations. | Review samples of different written forms of workplace communication media and discuss their use in the workplace.  Review good and bad examples of workplace documentation and compare the characteristics of each.  Provide students with the opportunity to view and |
|  |  | correctly use/complete a range of written media in a variety of potential and real situations in the workplace.  [Link to Task 11] |
|  | Knowledge of the meaning and use/application of visual communication common to the industry:   * signage * symbols * gestures * signals   + hand   + light   + sound. | Stimulus – a range of visual communication used in the manufacturing, engineering and related services industries.  Written test. [Task 8] |
|  | Selection and use of various communication methods/ equipment in a variety of potential and real situations in the workplace. | Identify different forms of each type of communication:   * verbal * non-verbal * written.   Class discussion of the advantages and disadvantages of a range of modes of communication.  Identify and list the communication media/equipment used in the manufacturing, engineering and related services industries. From the list developed, in table format, briefly outline the features, benefits, limitations and examples of use.  *Provide students with the opportunity to select and correctly use a range of verbal, non-verbal and written communication methods/equipment in a variety of potential and real situations in the workplace throughout the metal and engineering course.* |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **2 Plan activities**  2.1 Common goals, objectives and task requirements are identified and clarified with appropriate persons.  **3 Work with others**  3.2 Assigned or agreed tasks are performed in | Workplace practices Factors impacting on workplace activities:   * occupational health and safety (OHS) * legislative/regulatory requirements * duty of care * awards and agreements * industry codes of practice. | Class activity – develop a mind map for each factor identifying its impact on workplace practices. |
| accordance with agreed requirements, specifications and workplace procedures.  3.3 Work progress is reviewed and modified as agreed to complement the work of others. | An understanding of work requirements:   * goals * objectives * priorities * specified targets or results * time frames * coordination with other work processes * roles * application of particular procedures * organisation of work materials * roster arrangements * assisting new staff * sharing knowledge of particular tasks or work requirements. | Class discussion – the importance of each work requirement in a manufacturing, engineering and related services industries environment.  Link to practical tasks/projects, as well as work placement. |
|  | Variations and difficulties affecting work requirements:   * weather * unrealistic employer expectations * time and resource availability * faulty/damaged tools and equipment * overwork * personal issues * lack of licensing/training * staff shortages/changes in staff * transport to and from site * injury/illness * safety concerns * union policy. | Small group activity – each group is allocated a different aspect of the manufacturing, engineering and related services industries (eg fabrication, jewellery manufacture, boating services, marine craft construction). Discuss how each factor may impact on work tasks. Report back to the class. |
|  | Differences in workplace practices between organisation/ company. | Students reflect on their experiences at work placement and share with the class. [Link to Task 1] |
| *MEM14004A Plan to undertake a routine task*  **1 Identify task requirements**  1.1 Instructions and procedures are obtained, understood and where necessary clarified.  1.2 Relevant specifications for task outcomes are obtained, understood and where necessary clarified.  1.3 Task outcomes are identified.  1.4 Task requirements such as completion time and quality measures are identified.  *MEM15002A Apply quality systems*  **1 Work within a quality system** | Instructions and specifications A range of sources for work instructions and procedures:   * work schedules * job card/sheet/plans/specifications * standard operating procedures (SOP) * standard operation sheets * Material Safety Data Sheets (MSDS) * diagrams/sketches * regulations/legislation * manufacturer/workplace guidelines, policies and procedures * Australian Standards. | *During the course, students are to be provided with a range of work instructions and procedures to enable them to become familiar with industry documentation and interpret to complete tasks/projects.*  Visual stimulus – view a range of documents containing work instructions and procedures (see list in content column).  Student activity – identify the work instructions and/or procedures that each document provides. |
| 1.1 Instructions and procedures are followed and duties are performed in accordance with requirements of quality improvement system.  1.2 Conformance to specifications is ensured.  *MEM15024A Apply quality procedures* | A definition of:   * specification/s * standard operating procedures (SOP) * task outcome/s * task requirement/s | Handout.  Identify the difference between specifications, SOPs, task outcomes and task requirements. |
| **1 Take responsibility for own quality**  1.1 Concept of supplying product or service to meet the customer requirements (internal and external) is understood and applied.  **2 Apply standard procedures of workplace** | Knowledge of the reasons for using:   * specification/s * standard operating procedures (SOP). | Class discussion. |
| **quality to own job**  2.2 Conformance to specifications is ensured.  *MEM16007A Work with others in a manufacturing, engineering or related environment*  **2 Plan activities**  2.1 Common goals, objectives and task | An awareness of the reasons for ensuring work conforms to specification (or benefits of good quality):   * quality products/services * reduced costs * customer confidence, satisfaction and loyalty * good reputation * job satisfaction * solving problems * increased competitiveness | Overhead – benefits of good quality. |
| requirements are identified and clarified with appropriate persons. | * keeping up with technology. |  |
|  | An awareness of various modes of communication to receive work instructions:   * verbal   + face to face (supervisor to employee)   + telephone/mobile phone   + workplace meetings * written communication   + work plans   + memos/messages   + job descriptions/statements   + workplace forms   + rosters * non-verbal   + signage   + diagrams. | *During the course, students are to receive work instructions via a range of modes of communication.*  Overhead:   * ways in which work instructions may be communicated to workers * strategies for obtaining, understanding and clarifying work instructions * sources of technical advice and support. |
|  | Strategies for obtaining, understanding and clarifying instructions/procedures and specifications for task outcomes:   * correct sourcing and selection of information * consult appropriate personnel * active listening * open and closed questions. |  |
|  | Sources of technical advice and support:   * industry bodies * journals * the internet * experts. |  |
|  | A range of opportunities to read, interpret and follow information/work instructions for a range of work tasks of varying degrees of difficulty. | Link to practical tasks/projects, as well as work placement. |
| *MEM14004A Plan to undertake a routine task*  **2 Plan steps required to complete task**  2.1 Based on instructions and specifications provided, the individual steps or activities required to undertake the task are understood and where necessary clarified.  2.2 Sequence of activities is identified.  2.3 Plan is checked to ensure it complies with specifications and task requirements.  *MEM16007A Work with others in a manufacturing, engineering or related environment*  **2 Plan activities** | Planning work activities The importance of the following to successful planning:   * organising tasks:   + prioritising   + time management to meet deadlines   + negotiation * clarifying personal responsibilities * work ethics * seeking assistance where necessary * acknowledging if tasks are beyond current capacity * planning and organising work routines on a daily, weekly or monthly basis. | Brainstorm – what contributes to successful planning? |
| 2.2 Individual tasks are determined and agreed on according to workplace procedures. | Information provided in a work/job plan:   * designated work tasks * tool, equipment and material use * procedures for pre-start and safety checks of tools and equipment * time frame for work completion * quality measures * supervisor’s instructions * reporting procedures and requirements. | Overhead:   * outlining information provided on a work/job plan * a sample work/job plan.   Practical activity – students develop a work/job plan which will ensure the requirements of a work order are achieved. [Task 12] |
|  | Work sequencing:   * receiving instruction * organising for the task   + selection of tools and equipment   + locate materials and/or parts   + PPE * carry out the task   + in a logical order   + within completion time frame   + according to quality measures * clean-up after task completion. | Overhead – steps in work sequencing. |
|  | Planning and preparation, including task specifications and requirements, for a range of tasks/activities applicable to:   * a general engineering context * a specific industry area, for example, boating services or fabrication or jewellery making or marine craft construction, etc. | Link to practical tasks/projects. |
|  | Preparation of work plans for a range of routine tasks in:   * a general engineering context * a specific industry area, for example, boating services or fabrication or jewellery making or marine craft construction, etc. | Link to practical tasks/projects.  [Task 12] |
| *MEM14004A Plan to undertake a routine task*  **1 Identify task requirements**  1.2 Relevant specifications for task outcomes are obtained, understood and where necessary clarified.  1.3 Task outcomes are identified.  1.4 Task requirements such as completion time and quality measures are identified.  **3 Review plan**  3.1 Effectiveness of plan is reviewed against specifications and task requirements.  3.2 If necessary, plan is revised to better meet specifications and task requirements.  *MEM15002A Apply quality systems*  **1 Work within a quality system**  1.1 Instructions and procedures are followed and duties are performed in accordance with requirements of quality improvement system.  1.2 Conformance to specifications is ensured.  *MEM15024A Apply quality procedures* | Carry out work An awareness of safe work practices and procedures for a workplace within the manufacturing, engineering and related services industries:   * occupational health and safety (OHS) induction training (general, work activity and site-specific) * selection, use and maintenance of personal protective equipment (PPE) * selection of appropriate tools for the task * correct use, maintenance and storage of tools, equipment and machinery * correct handling, application, transport and storage of hazardous and non-hazardous materials * safe posture (sitting, standing, bending and lifting) * correct manual handling (lifting and transferring) * hazard identification and risk control * procedures to follow in the event of an emergency * basic first aid training and access to first aid kits * correct use of fire fighting equipment:   + fire blanket   + fire extinguishers   + fire hydrant and hose * effective communication and teamwork | Content covered in sample program *Safety in the workplace*.  Revise and contextualise to the units covered in this program. |
| **1 Take responsibility for own quality**  1.1 Concept of supplying product or service to meet the customer requirements (internal and external) is understood and applied.  **2 Apply standard procedures of workplace quality to own job** | * adherence to work instructions, workplace policies and standard operating procedures * housekeeping/clean-up procedures with due consideration to OHS and the environment. |  |
| 2.2 Conformance to specifications is ensured.  *MEM16007A Work with others in a manufacturing, engineering or related environment*  **3 Work with others**  3.2 Assigned or agreed tasks are performed in accordance with agreed requirements, specifications and workplace procedures. | Knowledge of process and product specifications to which work outcome is to comply for a range of tasks/duties within a manufacturing, engineering and related services industries workplace.  Specification/s for a range of activities applicable to:   * a general engineering context * a specific industry area, for example, boating services or fabrication or jewellery making or marine craft construction, etc.   Task outcome/s and requirement/s for a range of activities applicable to:   * a general engineering context * a specific industry area, for example, boating services or fabrication or jewellery making or marine craft construction, etc. | Practical application throughout the metal and engineering course.  [Link to Tasks 20–23] |
|  | Review work plan against specifications and task requirements. | Link to practical tasks/projects. If required, revise work plan to better meet specifications and task requirements. |
| *MEM14004A Plan to undertake a routine task*  **2 Plan steps required to complete task**  2.3 Plan is checked to ensure it complies with specifications and task requirements.  *MEM15002A Apply quality systems*  **2 Engage in quality improvement**  2.1 Current performance is assessed. | On-the-job quality Acknowledgement of:   * the importance of workers   + understanding the quality requirements for their own job   + checking/clarifying task-related information and work instructions including customer requirements   + taking responsibility for the quality of their own work   + using accepted industry workplace techniques/ | Class discussion.  Peer and self evaluation at the completion of practical tasks/projects. [Task 13] |
| 2.2 Established performance measures are identified.  2.3 Specifications and standard operating procedures are identified.  2.4 Defects are detected and reported according to standard operating procedures.  2.5 Process improvement procedures are participated in. | practices and procedures   * + following workplace SOP   + producing work outcomes to specification/s   + using safe work practices * the effects on the workplace/company if workers do not take responsibility for the quality of their own work. |  |
| 2.6 The improvement of internal/external customer/supplier relationships is participated in.  2.7 Performance of operation or quality of product or service is monitored to ensure customer satisfaction.  *MEM15024A Apply quality procedures*  **1 Take responsibility for own quality**  1.2 Responsibility is taken for quality of own work.  **2 Apply standard procedures of workplace quality to own job**  2.1 Quality system procedures are followed.  2.2 Conformance to specifications is ensured. | An understanding of quality system procedures as they apply to the individual’s own job/task/duties. | Link to practical tasks/projects, as well as work placement. |
| *MEM15002A Apply quality systems*  **1 Work within a quality system**  1.2 Conformance to specifications is ensured.  1.3 Defects are detected and reported according to standard operating procedures.  1.4 Performance of operation or quality of product or service is monitored to ensure | Customer satisfaction, defects and non-compliance Knowledge of monitoring process/procedures for the following to ensure customer satisfaction:   * performance of operation * quality of product/service. | Link to class practical tasks/projects, as well as work placement.  [Link to Task 1] |
| customer satisfaction.  *MEM15024A Apply quality procedures* | An awareness of examples of common defects. | Teacher to have samples/photos of defects that may occur during manufacture of class tasks/projects. |
| **2 Apply standard procedures of workplace quality to own job**  2.2 Conformance to specifications is ensured. | A knowledge of:   * methods of detection * procedures for reporting/recording   + verbal/written   + formal/informal. | Class discussion and sample documentation.  Work placement activity.  [Link to Task 1] |
|  | SOP for non-compliance/conformance of work outcome to specifications. | Class discussion and accompanying handout.  Work placement activity.  [Link to Task 1] |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **3 Work with others**  3.2 Assigned or agreed tasks are performed in accordance with agreed requirements, specifications and workplace procedures.  3.3 Work progress is reviewed and modified as | Managing workloads A range of strategies to assess and manage workloads:   * time management * seeking help/assistance when needed * contingency planning * effective use of technology. | Class discussion.  Link to practical tasks/projects. |
| agreed to complement the work of others. | A basic knowledge of principles of time and task management. | Handout – briefly outlining the principles underlying the concepts of time management and task management.  Students to develop a personal weekly time plan/schedule.  View workplace samples of a range of work management tools such as calendars/diaries (paper/electronic), rosters, work schedules, standard operating procedures. Identify features, benefits and limitations. |
|  | Features of time management:   * consultation with others * prioritising * delegation * problem-solving * decision-making * use of diaries | Handout – briefly outlining each feature of time management. |
|  | * negotiating * accommodation of changes to routine * minimising time wasters. |  |
|  | Organising tasks in terms of:   * prioritising * negotiating * time management * time frames * individual needs * team/group needs. | Define and discuss concepts. |
|  | Acknowledgement of the effect poor time management has on:   * other workers * clients * organisation/company. | Case studies. |
|  | Application of time management techniques to work activities in manufacturing, engineering or related industry context. | Link to practical tasks/projects.  [Link to Tasks 20–23] |
| *MEM15002A Apply quality systems*  **1 Work within a quality system**  1.4 Performance of operation or quality of product or service is monitored to ensure customer satisfaction.  **2 Engage in quality improvement**  2.1 Current performance is assessed. | Quality improvement A basic knowledge of the requirements of at least one quality improvement system currently in operation in a manufacturing, engineering and related services industries workplace. | Industry visit and/or work placement activity.  [Task 14] |
| 2.2 Established performance measures are identified.  2.3 Specifications and standard operating procedures are identified.  2.4 Defects are detected and reported according to standard operating procedures. | Application of quality improvement system concepts (in relation to performance of operation as well as end product/service) to a range of tasks within a manufacturing, engineering and related services industries workplace. | Link to practical tasks/projects. |
| 2.5 Process improvement procedures are participated in.  2.6 The improvement of internal/external customer/supplier relationships is participated in.  2.7 Performance of operation or quality of product or service is monitored to ensure customer satisfaction.  *MEM15024A Apply quality procedures*  **1 Take responsibility for own quality**  1.1 Concept of supplying product or service to meet the customer requirements (internal and external) is understood and applied. | An awareness of:   * the benefits of good customer/supplier relationships. * examples of the ways in which customer/supplier relationships can be improved. | Class discussion. |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **3 Work with others**  3.1 Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives. | Conflict resolution Conflict resolution as a means to:   * improving business relationships * eliminating entrenched practices * future development of the organisation/company. | Class debate/discussion – ‘Conflict is an inevitable part of human life that provides opportunity to learn, to grow and to negotiate’. |
|  | Causes of issues, problems and conflicts in the workplace:   * poor customer service * variations in colleagues’ work practices/methods * cultural misunderstandings * barriers to communication * aggressive behaviour * misunderstandings regarding roles and responsibilities. | Stimulus material – video, newspaper report, etc.  Class discussion – why or how will these cause misunderstanding or conflict? |
|  | The value of anticipating and addressing potential conflict prior to its escalation. | Brainstorm – signs/symptoms of conflict. |
|  | Recognise potential for conflict through:   * active listening * observing body language * reading subtext. | Case studies and role plays. |
|  | Techniques to resolve issues, problems or conflicts including:   * problem-solving * negotiation * conflict resolution * use of a mediator or conciliator. | Identify and discuss different techniques to resolve issues, problems or conflicts and assess their effectiveness.  Visual stimulus – video on topic. |
|  | Conflict resolution techniques, specifically those that:   * minimise adversarial contests * promote the concept of ‘win-win’ * allow for solutions that meet all parties’ needs. | Class discussion and accompanying notes:   * identify different types of conflict resolution techniques/ procedures * positives and negatives of various approaches to conflict resolution * best approach for common conflict situations.   Role plays – responding to personal conflict situations.  Students work in teams to solve relevant industry problems. Students identify the problem, put it into action and follow up. |
| *MEM16007A Work with others in a manufacturing, engineering or related environment*  **1 Identify roles and responsibilities**  1.1 Own role and responsibilities are identified*.* | Career pathways and skill development An awareness of career pathways within the industry and knowledge and skills required for different job roles. | Some of the content and activities for this section of the program have been covered in sample program *Induction to the industry*.  Guest speaker – school careers advisor and/or industry representative.  Class activity – to summarise, develop a mind map of careers available in the manufacturing, engineering and related services industries. |
|  | Self-reflection skills:   * recognition of current knowledge and skills * identification of:   + knowledge and skills required for current job   + knowledge and skill gaps   + learning opportunities to meet potential learning needs and fulfil career aspirations and/or future organisation/company objectives. | Class discussion –   * how can being multiskilled assist with career opportunities? * what opportunities are available to an employee to upgrade knowledge and skills?   Practical activities:   * develop a curriculum vitae * locate and ‘apply for’ an entry level position in the |
|  | An awareness of opportunities for upgrading knowledge and skills:   * industry seminars * in-services * training courses * in-house training * reference manuals. | manufacturing, engineering or related services industry (from the newspaper, Internet or alternative)   * identify a position to which you aspire and conduct a knowledge/skills gap analysis * develop a personal development needs plan to help achieve career aspirations * begin compiling evidence of learning (portfolio of learning). |